What is claimed is:

1. An image signal processing device for producing luminance signals from image signals output from a solid-state image-sensing device having a plurality of types of color filters arranged one for each of pixels thereof, comprising:

an image signal accumulator for accumulating, for each of the types of color filters provided for the pixels of the solid-state image-sensing device, signal levels of image signals output from those of the pixels which are sensing a low color saturation region in which color saturation is low;

a transmitted light amount corrector for producing, based on correction constants set one for each of the types of color filters provided for the pixels of the solid-state image-sensing device, corrected image signals by correcting image signals output from the pixels of the solid-state image-sensing device in order to counterbalance, for each of the types of color filters, amounts of light transmitted through the color filters;

a correction constant calculator for setting, based on the signal levels of the image signals accumulated for each of the types of color filters in the image signal accumulator, the correction constants one for each of the types of color filters and feeding the thus set correction constants to the transmitted light amount corrector;

a first luminance signal generator for smoothing a corrected image signal currently being fed thereto from the transmitted light amount corrector as obtained from a currently targeted pixel and corrected image signals obtained from a plurality of pixels located in neighborhood of the currently targeted pixel in order to produce a luminance signal for the currently targeted pixel; and

a second luminance signal generator for newly producing a luminance signal for the currently targeted pixel based on the corrected image signal fed thereto from the transmitted

light amount corrector as obtained from the currently targeted pixel and the luminance signal fed thereto from the first luminance signal generator as produced for the currently targeted pixel.

2. An image signal processing device as claimed in claim 1,

wherein, when the currently targeted pixel is a pixel that is sensing the low color saturation region, the second luminance signal generator uses as a luminance signal for the currently targeted pixel the corrected image signal fed from the transmitted light amount corrector, and, when the currently targeted pixel is a pixel that is sensing a region other than the low color saturation region, the second luminance signal generator uses as a luminance signal for the currently targeted pixel the luminance signal fed from the first luminance signal generator.

3. An image signal processing device as claimed in claim 1,

wherein the second luminance signal generator uses as a luminance signal for the currently targeted pixel a signal produced by adding together the corrected image signal fed from the transmitted light amount corrector and the luminance signal fed from the first luminance signal generator with predetermined weights assigned to these two signals according to the color saturation of the image signal obtained from the currently targeted pixel.

4. An image signal processing device as claimed in claim 3,

wherein the second luminance signal generator produces the luminance signal with the weights assigned in such a way that, the lower the color saturation of the image signal, the heavier the weight assigned to the corrected image signal.

5. An image signal processing device as claimed in claim 1,

wherein the correction constant calculator sets the correction constants in such a way that the correction constants yield identical values when multiplied by the signal levels, accumulated for each of the types of color filters, of the image signals obtained from the pixels that are sensing the low color saturation region.

6. An image signal processing device as claimed in claim 1,

wherein the transmitted light amount corrector produces the corrected image signals by multiplying the image signals by the correction constants.

7. An image signal processing device as claimed in claim 1, further comprising:

a color saturation accumulator for accumulating color saturation values of image signals within each of a plurality of color saturation calculation regions provided within an image constituting one frame obtained by reproducing the image signals; and

a color saturation evaluator for judging whether or not each color saturation calculation region is a low color saturation region in which color saturation is low according to the color saturation values thus accumulated.

8. An image signal processing device as claimed in claim 1, further comprising:

a chrominance signal generator for producing chrominance signals from the image signals,

wherein color saturation of the image signals is determined based on color difference signals produced within the chrominance signal generator.

9. An image signal processing method for producing luminance signals from image signals output from a solid-state image-sensing device having a plurality of types of color filters arranged one for each of pixels thereof, including:

a step of accumulating, for each of the types of color filters provided for the pixels of the solid-state image-sensing device, signal levels of image signals output from those of the pixels which are sensing a low color saturation region in which color saturation is low;

a step of setting, based on the signal levels of the image signals accumulated for each of the types of color filters provided for the pixels of the solid-state image-sensing device, correction constants with which to counterbalance amounts of light transmitted through the color filters provided for the pixels that are sensing the low color saturation region;

a step of producing corrected image signals by multiplying by the correction constants the image signals output from the pixels of the solid-state image-sensing device that are sensing the low color saturation region; and

a step of using the corrected image signals as luminance signals for the pixels of the solid-state image-sensing device that are sensing the low color saturation region.

10. An image signal processing method as claimed in claim 9,

wherein smoothed image signals produced by smoothing image signals obtained from one set after another of a plurality of adjacent pixels are used as luminance signals for image signals output from those pixels of the solid-state image-sensing device which are sensing a region other than the low color saturation region.

11. An image signal processing method as claimed in claim 9,

wherein the correction constants are so set as to yield identical values when multiplied by the signal levels, accumulated for each of the types of color filters, of the image signals obtained from the pixels that are sensing the low color saturation region.

12. An image signal processing method as claimed in claim 9,

wherein color saturation values of image signals are accumulated within each of a plurality of color saturation calculation regions provided within an image constituting one frame obtained by reproducing the image signals, and whether or not each color saturation calculation region is a low color saturation region in which color saturation is low is judged according to the color saturation values thus accumulated.

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13. An image signal processing method for producing luminance signals from image signals output from a solid-state image-sensing device having a plurality of types of color filters arranged one for each of pixels thereof, including:

a step of accumulating, for each of the types of color filters provided for the pixels of the solid-state image-sensing device, signal levels of image signals output from those of the pixels which are sensing a low color saturation region in which color saturation is low;

a step of setting, based on the signal levels of the image signals accumulated for each of the types of color filters provided for the pixels of the solid-state image-sensing device, correction constants with which to counterbalance amounts of light transmitted through the color filters provided for the pixels that are sensing the low color saturation region;

a step of producing corrected image signals by multiplying by the correction constants the image signals output from the pixels of the solid-state image-sensing device that are sensing the low color saturation region; and

a step of using, as luminance signals for the image signals, signals produced by adding together the corrected image signals and smoothed image signals produced by smoothing image signals obtained from one set after another of a plurality of adjacent pixels, wherein the corrected image signals and the smoothed image signals are added together with predetermined weights assigned thereto.

14. An image signal processing method as claimed in claim 13,

wherein the luminance signals are produced with the weights assigned in such a way that, the lower the color saturation of the image signals, the heavier the weight assigned to the corrected image signals than to the smoothed image signals.

15. An image signal processing method as claimed in claim 13,

wherein the correction constants are so set as to yield identical values when multiplied by the signal levels, accumulated for each of the types of color filters, of the image signals obtained from the pixels that are sensing the low color saturation region.

16. An image signal processing method as claimed in claim 13,

wherein color saturation values of image signals are accumulated within each of a plurality of color saturation calculation regions provided within an image constituting one frame obtained by reproducing the image signals, and whether or not each color saturation calculation region is a low color saturation region in which color saturation is low is judged according to the color saturation values thus accumulated.